Session 3: Challenge Facing Resource Development: Questions and Answers
Moderated by Emilio J. Cárdenas

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Irene King‡
MR. ADAMS: I would like to raise a question to try to tie together the oil price forecast, the statement about pollution, the governmental problems, and the automobile which I think really were raised by Dr. Andersen and Ms. King. If I understand the situation correctly, oil supplies are plentiful and there is no basis for us to expect the price of oil to rise substantially in real terms. If I understand the automobile industry situation correctly, the consumers, particularly in the United States and, indeed, elsewhere as well, are dedicated to not changing their lifestyles in any way, shape, or form. My question is this: Why on earth does anyone expect there to be moderation of any kind in the use of oil in the automobile industry and, therefore, why on earth does anyone expect the single largest source of pollution to be in any way addressed or diminished within the next fifteen to twenty years?

DR. ANDERSEN: I'll give that a try first. I think it's important to distinguish between local air pollution problems and the question of greenhouse gas increases in the atmosphere.

With regard to local air problems, I think the United States has demonstrated that many opportunities exist to deal with them. When we look at the record on air pollutants as reported by the EPA over the last decade or so relating to ozone, and various types of volatile organic compounds in metropolitan areas, substantial progress has been made.

I do not think it is true that the U.S. public has been unwilling to pay for pollution control. The study was completed perhaps six or eight years ago but, at that point, it was estimated that to get all the catalytic converters and the fancy things that go with it for firing engines, as well as for improving the quality of the product that is being put in, the bill was well in excess of US$100 billion. Thus, people have been paying for pollution control where the problem is tangible and the problem is tangible. When you've got local air problems and as a result in the U.S., there has been considerable improvement over the last decade.

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I think it is quite interesting that in Europe in the last half a
dozens years there have been decisions with regard to catalytic
converters and, so, there too consumers are being called on to
pay for local air cleanup and apparently are willing to do it.

Mexico and Chile are taking steps where the problems are
tangible, in the dirty air of Santiago and the dirty air of Mexico.
In Thailand and Southeast Asia there have been recent decisions
with regard to improving fuel quality. The kinds of techniques
that were developed in the U.S. over the last decade are rapidly
being spread and people are in fact willing to pay for it.

The bigger question is if we really do have a greenhouse gas
problem, what would it take for people to be willing to pay to fix
it? Studies in the U.S. say we would have to have a very substan-
tial increase in the price of fuel for us to move towards stabiliza-
tion in the U.S. Thus, it's clear that people don't want to change
their life style with regards to having access to the automobile,
but people are willing to pay for a different kind of automobile
where there is a perceived benefit associated with that payment.
At this stage of the game, global warming has not been viewed as
a problem to be willing to pay for it.

MS. KING: I would have to say that we are less optimistic
about reductions in air pollution and the biggest reduction is
really the increased use of natural gas in electric generation and
by industry in general.

In terms of driving and paying, I was referring really to the
unwillingness of the U.S. public to pay a higher price for gaso-
line. Our price is a third of that paid by the rest of the industrial
world, and I notice that last year even a 4.3 cent tax was about to
be repealed in the middle of an election year.

While they will pay for the car changes and they will pay for
the new fuel, I have trouble visualizing people paying more for
gasoline. The reason that I single it out is that it is by itself the
single largest source of oil demand in the world. U.S. gasoline
demand is eleven percent of global oil demand. It exceeds the
total oil demand of Japan, the next largest consumer.

So, I don't see the U.S. really making any changes in its gas-
oline taxation and price, but there is a long-term risk that if the
pollution gets really bad, that could change and it could be
forced on the government by the public.

DR. ANDERSEN: At least my observation as an analyst, not
as a government employee, is that the only thing that seems to work in the U.S. with regards to willingness to pay is if you hide it. The fact that the consumer is paying the equivalent of ten or fifteen or twenty cents per gallon of gasoline is not seen very easily because it is hidden in the cost of the automobile. But in order to estimate what people been willing to pay for, this is how you could translate it back into the equivalent of what it would cost per gallon.

So our technique for dealing with environmental control is to hide the cost and to get associated with the production costs either only supplying the fuel or building of equipment and only if you say that the pump price is going up, will you really get reactions.

QUESTION: I have a question for the two panelists as to a theory that I have of the impact of deregulation. And then a question, if they agree with my theory, as to what the impact of the theory would be.

My theory is based on a single data point — my telephone bill. My telephone bill has tripled since the breakup of AT&T. As I understand it, the reasons for that are that the bundle of services for which one price has been charged has been broken up, they are charged separately, and then state and local governments add tax to each of those elements of the bill.

It seems to me that same thing will probably happen for individual consumers with respect to electricity. Do you think that is true and if it is true, do you think that will have any impact?

MS. KING: Yes, because one of the risks I mentioned. In an effort to keep the industrial consumer from moving, the utility will offer the industrial consumer a lower electric rate and the residential consumer will have to pay for the costs of whatever remain. In this area, New York, this has already been publicized — industrial users will get a 20% to 30% cut in electric costs, the consumer will get nothing or .3%. That is one of the reasons why this discrepancy could bring in Congress as happened with the cable television, where Congress said do something about this. We have to set national standards.

From the perspective of the financial markets who have no sort of value judgment to make about who pays, the decisions that have been made in the investments in energy under one set
of rules suddenly will be in the new set of rules. There is a real risk here that the discrepancy between the two prices will be quite vast in some states because of the ability to move across the U.S. and the large vast area of country.

QUESTION: I have a question to both panel members. In view of the Montreal convention of the protection of the ozone layer with the goal of the reduction of the use of fossil energy in the world, I missed one subject in your speeches. What is your estimation for the future about the development and use of the alternative energy sources that are possible like solar and wind energy and biochem.

DR. ANDERSEN: Well, I didn’t make the point specifically when I talked about the composition of fuel supply in our forecast but basically with regard to growth and supply, our base case is that fossil fuel is where it is at. There is some growth in renewables, but nuclear tends to fall off or grow very slowly, or both. In the U.S., of course, it is falling off and will fall off substantially over the next decade or so.

Renewable prices, or the cost of using renewable energy, has been going down substantially. Technology is in fact advancing but of course so also have been the costs of fossil fuel so the point of being able to displace had become progressively more difficult for suppliers of renewable energy. Thus, in our forecast, without any change in current policies, it is unlikely that that will change over the next decade or so. But of course if we move into a new policy environment, one of the principal things that people will be looking for is increased use in renewables.

QUESTION: Good morning. When we listen to Mr. Andersen’s presentation, which is not a political view, but an economic one, and when we listen to Ms. King’s presentation which focuses on the political prices and the particular environment, we don’t know where the effect on the prices of oil and energy resource stands because we don’t know where we are now.

DR. ANDERSEN: Well, it’s certainly an uncertain world out there. I wouldn’t be doing this shtick if I really knew what was going to happen across the board. The interesting thing, however, is in trying to think about these issues, what are the sources of uncertainty, and if you can understand the sources of uncertainty, can you better bound them? Can you look for different sets of information to inform your judgment? I don’t think
either one of us was trying to tell you that life is easy but there are ways of making it more informed as you go down the road.

QUESTION: I have an observation. The company that I represent has production in this country and we have just spent a billion dollars building a new building because in part, the current have captured just 93% of SO₂ and the new set will capture up to 99%. There are other countries in the world where capture of less than 50% is not unknown but I want to make the observation that you can spend an awful lot of money going to from 93% to 99% which might better be spent increasing the capture of something elsewhere. It doesn’t mean that this is a global problem in the developed world just that whatever the developed world does it must not overlook the fact that the developing world does actually represent a large enough percentage of the gases which create the problem. I am not saying that I have a solution to it, only that the money might better be spent in other ways than trying to go from what is already good to very good in one country.

DR. ANDERSEN: Well, the question is whether the marginal payoff for environmental benefit is bigger somewhere else than in, say, the United States? And I think the answer to that at least industrializing versus industrial is absolutely true. There is a marginal payoff that would be much bigger in industrialized countries versus the United States.

But the question is who has the power to twist which arm? In this country there is a power to twist the arm and we are looking for ways of improving our opportunities. When I say we, I’m thinking of governments around the world. Japan, for instance, is very concerned about what is happening to SO₂ in China so there is a continuing effort to try to find ways of making some capital available with regard to pollution control devices and the like, in part to help the Chinese, but in part also because of Japanese interest.

But this is an area that we are only beginning to worry about. I heard an economist from the World Bank give a presentation on pollution levels in Beijing. The way I understood it, on a local air pollution problem, base levels of pollution in Beijing were far higher than the worst that had ever been experienced in Pittsburgh.

Will that cause the Chinese to move to begin to twist arms
and trade off more in the direction of environmentalists? I think the answer to that is probably yes, but how fast, I don’t know. There are some very serious reports by the Chinese government on mortality with regard to pollution. There are some new rules with regard to pollution control devices with respect to new investment in certain areas and there is an awareness that is growing. I understand there is even a green group operating in various metropolitan areas in China.

But you know, you could look at it the other way. The good news is that the U.S. has in some measure, shown the way with regard to local air pollution control. The art of the Western countries is that joint companies are operating outside of jurisdiction to maintain the same kinds of standards that they do at home whether or not they have operations. That would be classic thinking locally and acting globally, but I think the issue really is about the kind of process that comes out of these things. When you are looking at less developed countries, a great number of small points source polluters, the precepts that large multinationals with huge smelters and processing possibilities and land use jurisdictions is to ensure, are the kinds of standards they are accustomed to enforcing and maintaining back home, translated into these jurisdictions so that this concept of environmental pollution and sanity can really go from the top downwards.